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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/820,348	04/07/2004	Roberto Aiello	012DIV-124	8143

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EXAMINER

AHN, SAM K

ART UNIT PAPER NUMBER

2611

DATE MAILED: 05/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/820,348	Applicant(s) AIELLO ET AL.	
	Examiner Sam K. Ahn	Art Unit 2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-7,9 and 10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-7,9 and 10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 05/04/06 has been entered.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1,3-7,9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dress, Jr. et al. USP 6,603,818 B1 (Dress, cited previously).

Regarding claims 1 and 6, Dress discloses a transmitter MAC layer (see Fig.10) comprising a clock synchronization unit (1001,1002) having a timing device with a clock speed, at least one frequency divider (1005,1003) coupled to said clock synchronization unit, said frequency divider configured to reduce said clock speed to generate a desired pulse repetition frequency (note col.8, line 43 – col.9, line 4), at least one slot allocation unit (1004) coupled to said at least one

frequency divider, and a multiplexer/demultiplexer (1008,1009) operatively coupled to said at least one slot allocation unit, said multiplexer/demultiplexer configured to merge a plurality of outgoing signals (note col.9, lines 47-56).

It is well-known in the art that the function of the frequency divider (1005,1003) delaying of a master clock to produce a delayed clock is equivalent to the function of "reducing a clock speed" to produce a desired clock. Dress teaches a frequency divider by the implementation of a programmable delay (1240) and pseudorandom polynomial generator (1220, note col.10, lines 51-55). Thus, Dress teaches the frequency divider (1005,1003) configured to reduce said clock speed to generate a desired pulse repetition frequency.

Although Dress further teaches wherein the at least one slot allocation unit is capable of repetition frequencies (1005 coupled to 1003 then to 1004 providing 7 derivative pulses individually, the programmable delay receives stable single frequency clock and provides seven derivative pulses having different repetition frequencies controlled by the programmable delay), Dress does not explicitly teach wherein the repetition frequencies are different repetition frequencies.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to implement having different repetition frequencies at the output of the at least one slot allocation unit (1004 in Fig.10). Applicant has not disclosed that having the different repetition frequencies provides an advantage, is used for a particular purpose or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected Applicant's invention to perform equally well

with a stable, single frequency because it provides stable timing signals, as taught by Dress (note col.8, lines 57-64). Furthermore, one skilled in the art would have expected to provide a different repetition frequencies by the programmable delay element (1005 being programmable) to provide different frequencies as the at least one slot allocation unit (1004 in Fig.10) implements different modulation schemes, one skilled in the art would be motivated to provide different frequency requirements depending on the modulation schemes, such as AM, FM, PM, BPSK, FSK, MSK, QPSK, OQPSK, MPSK, MFSK, ASK and OOK, as taught by Dress (note col.9, lines 17-46). Therefore, it would have been obvious to one of ordinary skill in this art to modify the stable, single frequency with different repetition frequencies to obtain the invention as specified in claim.

Regarding claims 3 and 9, Dress teaches all subject matter claimed, as applied to claim 1 or 6. Dress further teaches wherein each of said at least one slot allocation unit is configured to support different modulation techniques, such as pulse amplitude modulation and on-off keying (note col.9, lines 17-46).

Regarding claim 4, the claim is rejected based on the same ground as for claim 3 because of its similar scope.

Art Unit: 2611

Regarding claim 5, the claim is rejected based on the same ground as for claim 3 because of its similar scope.

Regarding claim 7, Dress teaches all subject matter claimed, as applied to claim 6. Dress further teaches wherein each of said at least one slot allocation unit has a particular pulse repetition frequency (note col.8, line 57 – col.9, line 16).

Regarding claim 10, the claim is rejected based on the same ground as for claim 3 because of its similar scope.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sam Ahn whose telephone number is (571) 272-3044. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammad Ghayour can be reached on (571) 272-3021. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Sam K. Ahn
5/11/06

Khao Rong Tran

05/12/2006

Primary Examiner

KHANH TRAN